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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,915	12/14/2004	Menno Willem Jose Prins	NL 020517	8868

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EXAMINER

SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,915	PRINS, MENNO WILLEM JOSE	
	Examiner	Art Unit	
	Leonid Shapiro	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 December 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed. 156
- 6) Claim(s) 1-5 and 8-10 is/are rejected.
- 7) Claim(s) 6,7,11 and 12 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-5,8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilkes et al. (US patent No. 5,580,251) in view of Ticknor et al. (US Patent No. 7,016,560 B2).

As to claim 1, Gilkes et al. teaches a tactile device (See Col. 1, Lines 11-12) provided with a number of fluid elements containing an electrically responding fluid (in the reference polar organic gel)(See Fig. 2, item 24, Col. 4, Lines 3-14 and Col. 5, Lines 6-7), a fluid level in each element being movable (See Col. 5, Lines 8-10), actuator means for moving the fluid level of a number of selected fluid elements by applying an electric force to said fluid elements (See Fig. 2, item 14, Col. 4, Lines 3-14 and Col. 5, Lines 8-10), wherein each fluid element is at one end provided with a tactile element (dimple in elastomeric film) that is in contact with the fluid for perception of the fluid level by a user, characterized in that the fluid elements comprise tubes in which the fluid level is movable (See Fig. 2, item 14, Col. 4, Lines 3-14 and Col. 5, Lines 8-10).

Gilkes et al. does not disclose electrically conductive fluid, capillary tubes, electrocapillary pressure.

Ticknor et al. teaches electrically conductive fluid (See Fig.3, item 301), differential-pressure electrocapillary effect (See Fig. 3, items 300-308, Col. 17, Lines 15-45).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate teachings of Ticknor et al. into Gilkes et al. system in order to move fluids effectively (See Col. 5, Lines 6-10 in the Ticknor et al. reference).

As to claim 3, Gikes et al. teaches a diaphragm of flexible material (a thin elastomeric film)(See Fig. 2, item 14, Col. 4, Lines 11-14).

As to claim 4, Gikes et al. teaches a diaphragm with at least one contact spot (dimple)(See Fig. 2, item 14, Col. 5, Lines 8-10).

As to claim 5, Gikes et al. teaches one or more tubes are provided at the opposite end with a further diaphragm of flexible material (a thin elastomeric film)(See Figs. 2,6 item 14, Col. 5, Lines 8-10).

As to claims 8-9, Ticknor et al. teaches one or more capillary tubes comprise a first fluid and a second fluid having different electrical conductivities, the fluids being essentially immiscible (See Fig. 3, items 301-303, Col. 17, Lines 15-45).

As to claim 10, Gikes et al. teaches actuator means comprise an electrical power source and number of electrodes (See Fig. 6, items 50,52,54 from Col. 4, Line 54 to Col. 5, Line 5).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ticknor et al., and Gilkes et al. as applied to claim 1 above, and further in view of Cooper et al. (US Patent No. 6,509,892 B1).

Ticknor et al., and Gilkes et al. do not disclose actuator means are arranged to vibrate the tactile element for a predetermined period of time.

Cooper et al. teaches actuator means are arranged to vibrate the tactile element for a predetermined period of time (see Fig. 4, item 52, Col. 7, Lines 17-37).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate teachings of Cooper et al. into Ticknor et al. and Gilkes et al. system in order to vibrate tactile actuator.

Allowable Subject Matter

4. Claims 6-7,11-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 6 the major difference between the teaching of the prior art of record (Ticknor et al., and Gilkes et al.) and the instant invention is that the actuator means are arranged for setting the fluid level of a number of selected capillary tubes at a predetermined prestressed level and wherein the device further comprises detector means that are arranged for detecting a change of fluid level in the selected capillary tubes.

Claims 7 and 11 depend on claim 6.

Relative to claim 12 the major difference between the teaching of the prior art of record (Ticknor et al., and Gilkes et al.) and the instant invention is that one or more capillary tubes comprise at least one electrode that is attached to the wall of the capillary tube.

Telephone Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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